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G. CLEMENTS & J. M. HOSTLER.

AIR PURIFYING APPARATUS.

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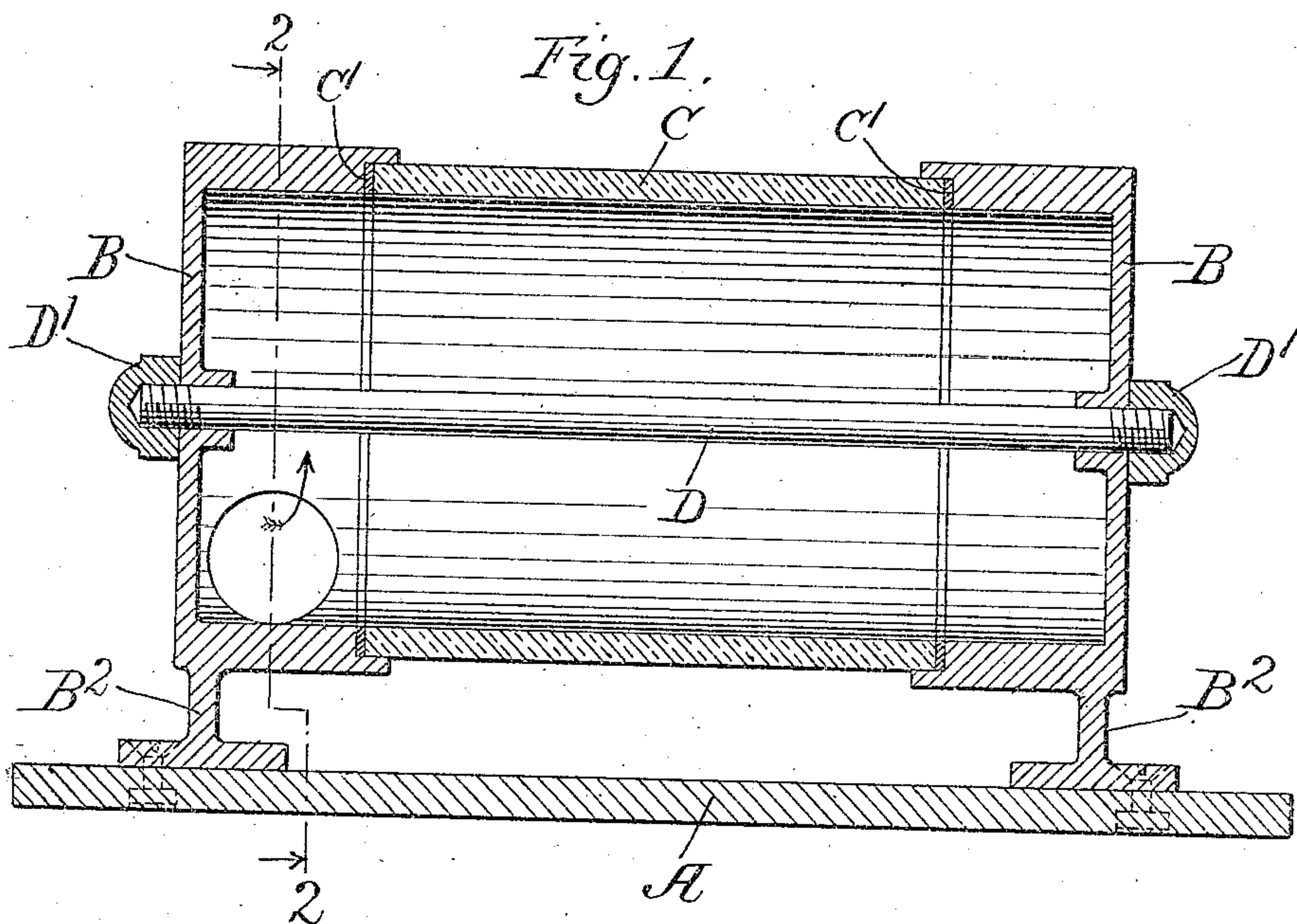
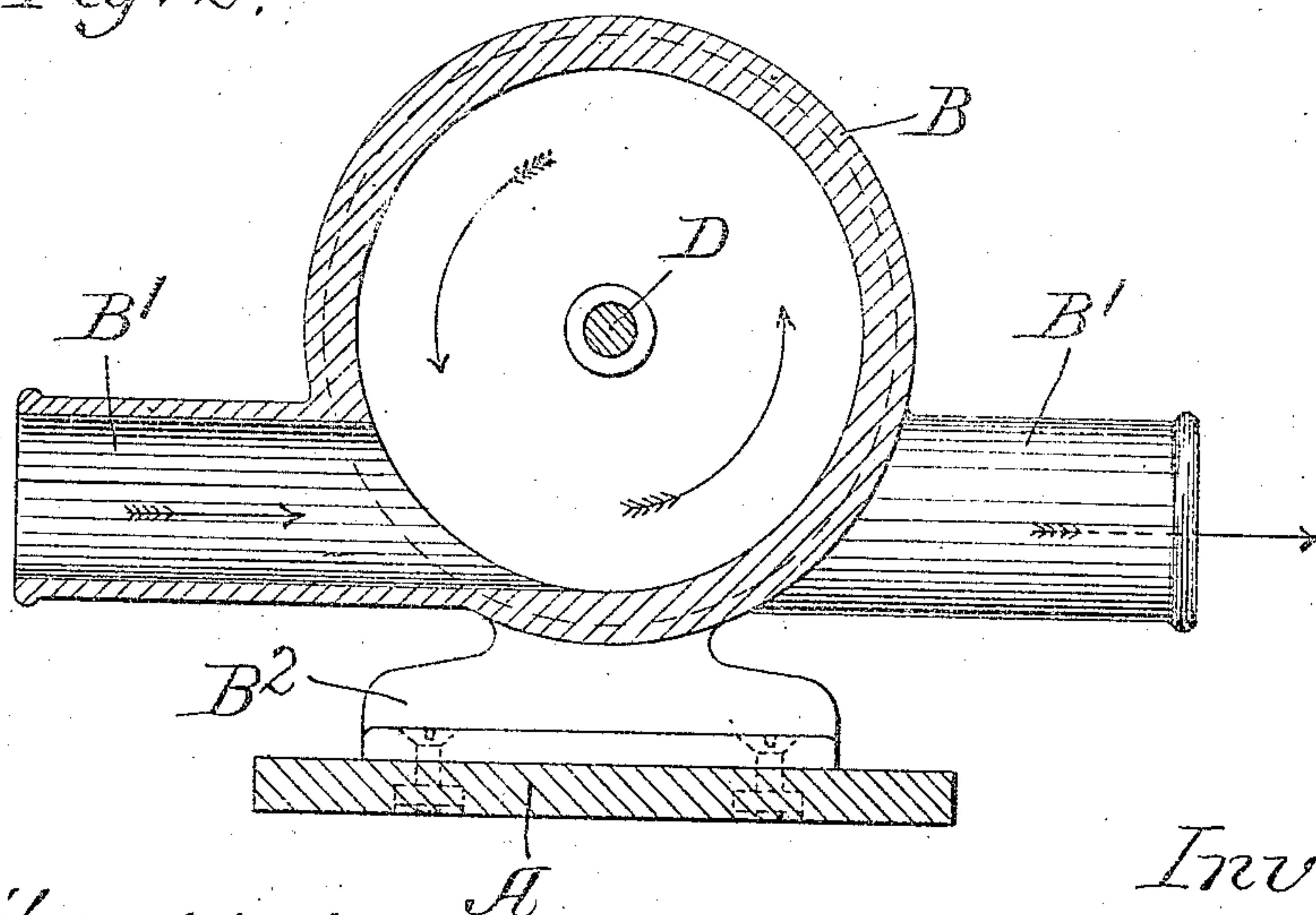


Fig. 2.



Witnesses, A
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UNITED STATES PATENT OFFICE.

GEORGE CLEMENTS AND JAMES M. HOSTLER, OF CHICAGO, ILLINOIS, ASSIGNORS
TO HYGIENIC RENOVATING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION
OF ILLINOIS.

AIR-PURIFYING APPARATUS.

No. 884,978.

Specification of Letters Patent.

Patented Aug. 20, 1907.

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To all whom it may concern:

Be it known that we, GEORGE CLEMENTS and JAMES M. HOSTLER, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Air-Purifying Apparatus, of which the following is a specification.

Our invention relates to an attachment for air purifying apparatus and has for its object to provide means whereby, without obstructing, interfering with or impeding the current of impure air it may be developed in such manner as to make its constant inspection easy and effective.

One form of my device is illustrated in the accompanying drawing wherein

Figure 1 is a longitudinal vertical section, and Fig. 2 is a cross section on the line 2-2.

Like parts are indicated by the same letter in all the figures.

A is a base plate preferably of metal.

B B are interchangeable end pieces each cup-shaped as shown and provided with a pipe connection and opening B¹ and a supporting leg B².

C is a glass cylinder bearing at each end on the gasket C¹ placed in a suitable recess formed in its associated end piece. The two end pieces are tightly drawn toward each other against the gasket and all the parts securely held in position by the rod D, which is screw threaded at its ends and received into the nuts D¹ D¹. When the parts are thus firmly brought to position, the legs are secured on the base A and the whole is complete for use.

The end pieces are preferably of metal and the device is preferably mounted so that the base is in a horizontal position as shown.

The use and operation of our device are as follows: The current of impure or dust laden air can be passed through the device in either direction. We have assumed that it takes the course indicated by the arrows, in which event it enters one of the end pieces tangentially, passing around the inner surface of such end pieces, then passing around the inner surface of the glass cylinder, and then around the inner surface of the other end piece and out through its opening.

The action of the current of air is such that in the first place the hard metal or other pieces therein contained and carried thereby are set into a swirling motion before they encounter the inner surface of the glass cylinder. This prevents the breakage of such cylinder. The

next action of the current of air is to keep the inner

surface of the cylinder clean because in its progress through the same it tends to strike such surface and rub or polish the same, which is not the case where the current of air is proceeding in a direct forward manner through a section of glass tubing. In the next place because the current of air is thus concentrated, or a series of its convolutions so to speak are concentrated in a single definite space, the air and its impurities or dust may be inspected. Broadly speaking there is no real interruption of the current. The current simply passes on a circuitous route through an inspection chamber or section.

We claim:

1. In a fluid inspection device comprising a partially transparent chamber forming part of the fluid passage-way and having an inleading opening adapted to discharge into such chamber tangentially to the inner surface thereof.

2. A fluid inspection device comprising a partially transparent cylindrical chamber forming part of the fluid passage-way and having an inleading opening adapted to discharge into said chamber tangentially to the inner surface thereof.

3. A fluid inspection device comprising a partially transparent cylindrical chamber, with a metallic cup-like end piece forming part of the fluid passage-way and having an inleading opening adapted to discharge into the end piece of said chamber tangentially to the inner surface thereof.

4. A fluid inspection device comprising a partially transparent cylindrical chamber with metallic cup-like end pieces forming part of the fluid passage-way and having each an opening adapted to discharge into such end piece of said chamber tangentially to the inner surface thereof.

5. A fluid inspection device comprising a partially transparent chamber, with an opening at each end adapted to discharge into said chamber tangentially to the inner surface thereof.

6. A fluid inspection device comprising a cylindrical transparent inspection chamber with metallic end pieces each having an opening which enters tangentially, and means for securing the whole together.

7. A fluid inspection device comprising a cylindrical transparent inspection chamber with metallic end pieces each having an opening which enters tangentially, and means for securing the whole together consisting of an axial rod passing through and secured to the outside of the end pieces.

8. A fluid inspection device comprising a cylindrical chamber approximately at right angles to the direction of current, provided with openings at its two ends which openings enter into the chamber tangentially.

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